3 Environmental

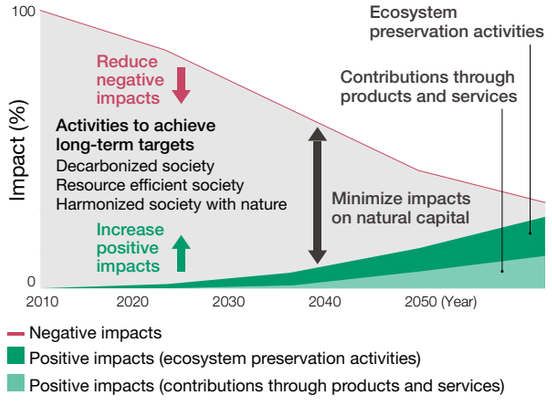
Achieving a Harmonized Society with Nature

Efforts to Achieve a Harmonized Society with Nature Approach

To adequately preserve the ecosystem and achieve a harmonized society with nature so that we may continue to enjoy nature's benefits, we have established targets to minimize our impact on natural capital as part of our long-term environmental targets.

We classify the emission of greenhouse gases and chemical substances into the atmosphere and the generation of waste materials in the course of our business activities as negative impact activities. Providing products and services that contribute to ecosystem preservation and undertaking activities to preserve biodiversity and ecosystems are categorized as positive impact activities. We are working to quantify and minimize the gap between positive and negative impacts by 2050.

A Timetable for Minimizing Impacts



Initiatives to Minimize Impacts on Natural Capital

Activities

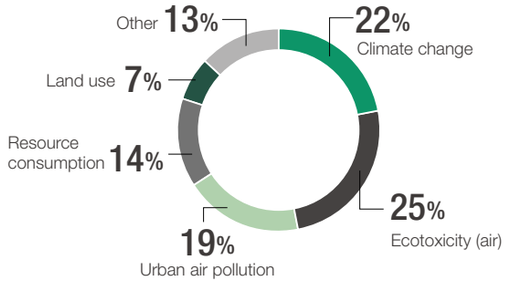
Hitachi has identified the negative impacts that our business activities have on natural capital with the aim of reducing such impacts and evaluated them using the latest version of an inventory database (IDEA v2*1). According to our estimates, approximately 80% of our total negative impacts on natural resources in fiscal 2021 were related to climate change, ecotoxicity (air), urban air pollution, and resource consumption. With regard to climate change, we will advance initiatives aimed at realizing a decarbonized society. Regarding ecotoxicity (air), urban air pollution, and resource consumption, in consideration of the findings coming to light in impact assessments concerning raw materials procurement, we will accelerate the pace of efforts intended to achieve a resource efficient society. Also, we found negative impacts were reduced by 15% in fiscal 2021 from fiscal 2020. To further reduce our environmental load to minimize our impact on natural capital, we will enhance a wide range of activities such as increasing the energy efficiency of our products and services, advancing factory efficiency, using resources more effectively, and properly managing chemical substances.

As for expanding our positive impact activities, while advancing social contribution activities like forest conservation and business activities that directly contribute to ecosystem preservation, such as building water treatment plants, we are also looking into quantifying the impact of these activities on the environment.

We estimate the benefits gained through our forest conservation activities (flood prevention, water impoundment, water purification, soil loss prevention, and carbon fixation) on an ongoing basis using evaluation methods commonly used in forestry-related public works projects. We also collect data on forested areas targeted for conservation activities using the Environmental Data Collection System (Eco-DS). These data are needed to evaluate forest conservation efforts, and in fiscal 2021, we surveyed 0.84 km² of such areas.

*1 IDEA v2: One of Japan's leading inventory databases which is needed to implement LCAs for calculating negative impacts.

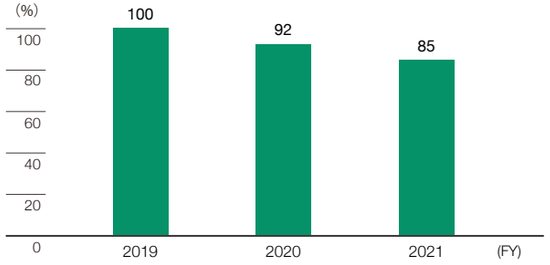
Negative Impact on Natural Capital (FY 2021)



Note: Calculated from version 2 of the Life-cycle Impact Assessment Method based on Endpoint Modeling (LIME2) by using IDEAv2

3 Environmental

Negative Impacts on Natural Capital



Scope of Negative Impact Calculations
https://www.hitachi.com/environment/data/method.html

Signing the Call to Action Statement, Initiated by Business for Nature

In 2020, the global Business for Nature coalition issued a Call to Action*1 statement. The aim is to encourage policy makers around the world to adopt policies to "to reverse nature loss in this decade." Hitachi agrees with this goal and has signed the statement.

*1 The Call to Action states that healthy societies, resilient economies and thriving businesses rely on nature. It urges governments to adopt policies to reverse the loss of nature, and calls for the protection, restoration, and sustainable use of natural resources.

Business for Nature's Call to Action
https://www.businessfornature.org/call-to-action

30by30 Alliance for Biodiversity Approved by Ministry of the Environment (MOE), Japan

The 30by30 target aims to conserve or protect at least 30% of the land and sea areas in Japan by 2030 to achieve nature-positive goals of curbing biodiversity loss and promoting restoration by the same year.

The 30by30 Alliance for Biodiversity was established to promote achievement of the 30by30 target agreed to at the G7 Summit 2021 and consists of governments, companies, and NPOs. Its goals are expanding national parks, registering in an international database areas such as rural satochi-satoyama landscapes and commercial forests for which biodiversity preservation is planned by various organizations, promoting the conservation of such areas and actively sharing information concerning these activities.

Hitachi supports this mission and will work to advance related efforts.

30by30 Alliance (In Japanese only)
https://policies.env.go.jp/nature/biodiversity/30by30alliance/

3 Environmental

Managing and Reducing Chemical Substances

Managing Chemical Substances

Approach

Hitachi believes that the control and reduction of chemical substances like volatile organic compounds (VOCs), one of the causes of urban air pollution, are important not only for reducing discharge of pollutants into the air and water environment but also for properly managing chemical substance usage, in order to minimize our impact on natural capital.

Based on this belief, Hitachi formulated the Environment and CSR-Based MONOZUKURI Standards to manage chemical substances at all stages of its operations—from design and development, procurement, and production to quality assurance and shipping. Chemical substances in our products are divided into two categories, prohibited substances and controlled substances, for separate management to respond to legal and regulatory frameworks at shipping destinations. With regard to chemical substances used in our business operations, we reduce risk by assigning three ranks to the use of such substances: prohibited, reduced, and controlled, as well as by educating chemical substance handlers and managers on laws and regulations and on proper risk assessment.

Managing Chemical Substances in Our Products

System Activities

Hitachi designates the chemical substances in our products requiring management as Voluntarily Controlled Chemical Substances. With the basic principle of taking as our model the standards of the EU, where regulations are stringent, we determine and manage controlled chemical substances regardless of export destination, type of industry, or purpose of use.

The list of managed substances and management levels is revised when necessary based on updates to the EU's REACH*1 and other regulations, with the aim of adding substances to our list of Voluntarily Controlled Chemical Substances six months before they are officially regulated. For instance, we have revised this list to include perfluorocarboxylic acids containing 9 to 14 carbon atoms in the chain (C9-C14 PFCAs), their salts, and their related substances due to new EU REACH regulations having been placed on them effective February 2023.

Classification Examples

Prohibited Substances (Level 1)
Substances for which use is generally prohibited inside and outside Japan in products (including packaging) but which might be found in products from suppliers.

Controlled Substances (Level 2)
Substances we are required to track and manage the use of and substances requiring attention to recycling or appropriate disposal methods.

*1 REACH: The European Union regulation of Registration, Evaluation, Authorisation, and Restriction of Chemicals.

Hitachi Group's voluntarily controlled chemical substances in our products
https://www.hitachi.com/environment/data/chemical.html

Managing Chemical Substances in Our Business Operations

System Activities GRI 305-7

Hitachi has been cutting emissions of chemical substances from its factories and other sites through stricter management, such as by expanding the number and scope of controlled chemical substances.

Case studies for reduction have been translated into English and Chinese and shared globally among Hitachi Group companies. We also follow legally prescribed procedures in measuring and managing emissions*1 of sulfur oxides (SOx) and nitrogen oxides (NOx), whose measurement is required under the laws and regulations of our business site locations, and are advancing efforts to further restrict emissions.

We comply with Japan's Pollutant Release and Transfer Register (PRTR) Law*2 through Group-wide monitoring of chemical substances released into the atmosphere or into public waters, removed outside our plants as waste, or discharged into sewage systems, reporting the results to local governments for each office or plant. Although some substances are exempt from reporting due to their small quantities, our policy is to aggregate and manage data on the handling, emission, and transfer of all PRTR substances totaling 10 kilograms or more per year.

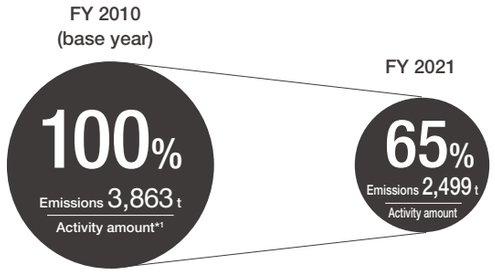
*1 Emissions of SOx and NOx: Calculated from data by business site (measured values, exhaust volume, content rate, etc.).
*2 PRTR Law: Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof.

3 Environmental

In fiscal 2021, which is the final year of the Environmental Action Plan for 2021 (fiscal 2019–2021), toward the target of reducing atmospheric emissions of chemical substances per unit by 18% from the base year 2010, we achieved a reduction rate of 35%. To reduce the emissions, we are switching from paints containing VOCs to water-soluble and powder paints as well as expanding their use and altering the painting and washing processes.

Environmental Action Plan for 2021 Management Values

Reduction in Atmospheric Emissions of Chemical Substances per Unit (Hitachi Group)



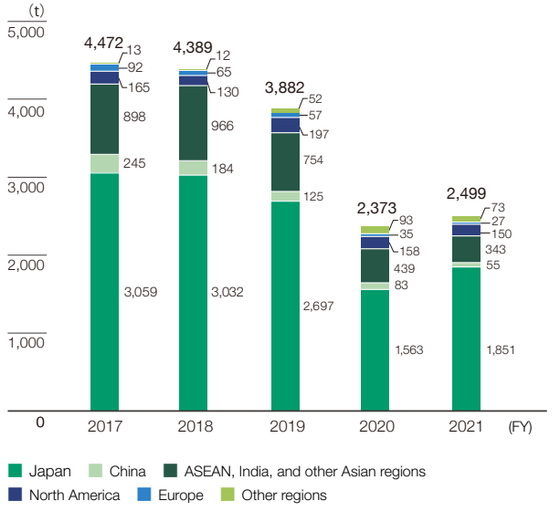
Reduction in atmospheric emissions of chemical substances per unit

35% reduction

FY 2021 reduction target: 18%

*1 Activity amount is a value closely related to atmospheric emissions of chemical substances at each business site (for example, substances handled, sales, and output)

Reducing Atmospheric Emissions of Chemical Substances (Hitachi Group)



Notes: Atmospheric emissions of VOCs and other chemical substances are calculated from the content rate included in the ingredients

P069 Environmental Load from Operations

Case Studies of Reducing Chemical Substances in Our Business Activities
https://www.hitachi.com/environment/casestudy/index.html#case05

3 Environmental

Preserving Ecosystems

Initiatives to Preserve Ecosystems

Approach Activities GRI 304-3

At Hitachi, we seek to reduce negative impacts on natural capital caused by business activities and to promote positive impacts, such as by undertaking social contribution activities to protect nature and providing products and services that help preserve the ecosystem, thereby minimizing our impact on natural capital by fiscal 2050.

Hitachi created an Ecosystem Preservation Activities Menu citing the specific activities to be undertaken to promote the preservation of the ecosystem, including activities that are difficult to quantify but are nonetheless important, such as the protection of rare species and efforts to make biodiversity a criterion when making investment decisions. Each business site sets its goals and promotes initiatives based on the Ecosystem Preservation Activities Menu and helps realize a harmonized society with nature.

Ecosystem Preservation Activities Menu

Category		Activities taken	No. of menu items
Business sites	Production	Reducing use of resources that cannot be reused	4
	Transportation	Using packaging that takes ecosystem into consideration	7
	Collection, disposal, and recycling	Reducing hazardous materials in products	2
	Product planning, development, and design	During R&D, estimating impact on biodiversity during a product's life cycle and implementing, if needed, mitigation measures	3
	Site management	Using native species, setting up biotopes	17
	Water use	Using rainwater	1
Value chain	Investment and acquisition	Confirming impacts on biodiversity when investing in or acquiring a business, and implementing measures to minimize such impacts	1
	Market entry and expansion	Including biodiversity as an investment criterion	1
	Business development	Developing products and services to purify water, air, and soil and expanding such businesses	1
	Procurement	Preferentially procuring paper and other office supplies that take biodiversity into consideration	17
	Transportation	Implementing ballast water measures during marine transportation	2
	Sales	Implementing sales expansion of products that take biodiversity into consideration	9
	Collection, disposal, and recycling	Reusing and recycling components	7
	Entire value chain	Promoting the use of renewable energy	1
Community	Engagement	Promoting employee activities outside the company	3
	Social contribution	Implementing desert greening and afforestation activities	12
Water use that takes watershed ecosystems into consideration	Water intake	Observing and collecting biota information (impact on ecosystem depending on intake volume)	14
	Water discharge	Setting up biota management indicators and making observations (species and numbers of inhabiting organisms)	14

Case Studies of Promoting Ecosystem Preservation
https://www.hitachi.com/environment/casestudy/index.html#case06